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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of	)	
Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems	)	**PR Docket No. 93-61** **RM-8013**

REPLY COMMENTS OF
EXECUTONE INFORMATION SYSTEMS, INC.

Executone Information Systems, Inc. ("Executone") hereby submits reply comments in response to the Commission's Notice of Proposed Rulemaking ("Notice"), FCC 93-141, released April 9, 1993. In the Notice, the Commission proposes to adopt permanent rules authorizing automatic vehicle monitoring and other Location and Monitoring Services ("AVM/LMS") in the 902-928 MHz band.

INTRODUCTION AND STATEMENT OF INTEREST

Executone is a manufacturer of customer premises business telecommunications equipment -- the equipment that businesses use to handle intra-office telephone calls and to originate and terminate calls that use the public telephone network. Executone products include the Executone, Isoetec, and Infostar PBX, hybrid, and key telephone systems; voice processing systems; automatic call distribution systems; predictive dialing systems and software. Executone's headquarters is in Darien, Connecticut. In addition to its manufacturing operations, Executone distributes equipment manufactured by itself and other manufacturers through a nationwide

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system of outlets and dealers. Executone and its affiliates together have over 4,000 employees. Executone's annual revenue, excluding affiliates, exceeds $280 million.

For several years, Executone has been engaged in research and development of wireless telecommunications systems. In general, wireless systems can offer substantial productivity gains to businesses by (1) reducing unanswered calls; (2) enabling executives and employees to conduct telephone business more conveniently and efficiently; and (3) reducing a business's dependence on costly inside wiring installations.

In particular, Executone has invested very substantial sums in the development of two wireless office telecommunications systems: a wireless PBX for the large business user and an innovative system for the small business (e.g., under 20 stations) and residential market. The smaller system will be user-installable and marketable through retail stores and mail-order houses. In contrast to currently available cordless telephones, Executone's product will provide small office and residential users with a wireless fully featured business telephone system with paging, multi-button and multi-line capabilities. Executone believes its product will for the first time allow cost effective delivery of a full range of business telephone system features to thousands of users in this difficult-to-address market segment.

Executone's product utilizes spread spectrum technology and is designed to operate in the 902-928 MHz band, in conformity with the Commission's Part 15 rules authorizing the use of spread

spectrum technology by unlicensed low-power devices. The 902-928 MHz band was selected for Executone's product because it was found to be the only available frequency band which meets the technical and cost criteria for designing, manufacturing, and marketing Executone's product at a price level at which small business and residential customers are willing to purchase a product of this type. If the 902-928 MHz band becomes unusable for Executone's

As explained by the North American Telecommunications Association ("NATA") and other parties, in amending Part 15 of its rules to authorize the use of the 902-928 MHz band for spread spectrum products, the Commission intended to provide manufacturers with the opportunity to utilize the unique characteristics of spread spectrum technology to design a wide variety of innovative, beneficial new products. Comments of NATA at 2. The Commission

bringing to market. The comments show that these services would cause massive interference to a wide variety of Part 15 spread spectrum devices.[2/] Comments of Cobra at 4-5; Thomson at 3. In Executone's case, our analysis confirms that the licensing of these

Part 15 products and from the standpoint of potential users of wideband, pulse-ranging AVM services.

In summary, the proposed allocation for wideband pulse-ranging systems would dramatically reduce or even eliminate the viability of the 902-928 band for spread-spectrum products

The fact that Part 15 products are unlicensed does not mean that the benefits derived therefrom are any less important than those derived from licensed services.[3/] In this regard, it is important to recognize, as a number of commenting parties do, that the secondary status of individual Part 15 users in relation to individual licensees does not in any way justify a wholesale policy reversal that entails the massive displacement of existing Part 15 users and the stifling of new product development.

The Commission has previously found that the encouragement of innovative uses of spread spectrum technology is in the public interest. The Commission has found the development of Part 15 devices in the 902-928 MHz band using this technology to be in the public interest. In fact, there has been an outpouring of new Part 15 products and services, as demonstrated by the record of this proceeding.

To overturn these prior public interest determinations, there must be an affirmative showing that the benefits of the service that would displace these products and services outweigh the costs. There has been no such showing. Rather, under the Commission's proposal, the wide diversity of Part 15 products would be sacrificed merely to allow nationwide deployment of a highly spectrum- and power-intensive technology -- wide-band pulse-

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[3/]Indeed, as a number of parties point out, low-power devices can be far more efficient in their use of spectrum than high-powered services. [cites] In addition, the unlicensed aspect of low-powered devices means, in general, that market forces can more effectively influence the efficient allocation of resources without the distortions introduced by a licensing process.

ranging AVM systems.[4/] While the list of conceivable applications associated with this service may be impressive, the comments raise serious questions whether the spectrum-intensive technology utilized by wideband pulse-ranging systems is an appropriate and sufficiently efficient technology for the applications contemplated, particularly in light of other technological and regulatory developments. As many commenting parties point out, recent developments have enabled vehicle location and related applications to be implemented with other technologies using other already allocated frequencies, with much greater efficiency and less harm to other spectrum uses than would occur under the Commission's proposal. Comments of AT&T at 2-4; Norand at 11-12; Part 15 Coalition at 13-16; Spectralink at 4.

For all these reasons, the proponents of wide-band, pulse-ranging AVM systems have failed to show that licensing these systems as proposed is in the public interest despite the harm they will inflict on the development of innovative Part 15-authorized products such as Executone's. The benefits of the Commission's Part 15 policies have been and will continue to be substantial if product development efforts are not curtailed by preemptive allocations of critical frequencies to high-powered spectrum-intensive services. Allowing the successful development of wireless office telephone systems such as Executone's will improve

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[4/]As discussed below, the comments indicate that it may be possible to allocate spectrum for licensing of "narrowband" AVM or "AVI" services transmitting within closely confined areas, provided that the power is carefully limited.

productivity for thousands of employees and executives in large and small businesses throughout the country. To prevent the needless displacement of a multitude of Part 15 products in the market and under development, the Commission should not adopt the proposed rules for authorization of AVM service in the 902-928 MHz band.

II. THE COMMISSION MUST LIMIT THE POWER OF AND FREQUENCIES ALLOCATED TO NARROWBAND AVM SERVICES

The comments indicate that narrow-band, local-area "automatic vehicle identification" ("AVI") services, which the Commission proposes to license in the 902-04, 912-18, and 926-28 MHz bands, may also pose a threat of interference to Part 15 devices, although the threat appears to be substantially more manageable than the threat posed by wide-band pulse-ranging services.

The Commission must limit the power, antenna height, and the frequencies allocated to narrow-band services to ensure that they do not adversely affect the marketability of unlicensed wireless business telephone systems devices in the bands where such services are unauthorized. Comments of AT&T at 7-8. Moreover, if the Commission goes ahead with the allocation of frequencies for wide-band pulse-ranging services, despite the opposition of Executone and other parties, the remaining frequencies cannot be allocated in their entirety to narrow-band services without creating the potential to completely destroy any remaining usability of the 902-928 MHz band for Part 15 spread spectrum applications. Comments of Norand at 9-10.

CONCLUSION

The Commission's Part 15 spread spectrum policy has stimulated hundreds of companies to develop beneficial new products that improve productivity. These companies, including Executone, have relied on this policy to collectively invest millions of dollars in innovative low-power spread spectrum products. The record in this proceeding does not support the reversal of this policy and the sacrifice of the benefits of R&D investment to make way for a high-powered service utilizing a technology that is needlessly